

## AMENDMENTS TO THE CLAIMS

This following listing of claims replaces all previous versions of the claims in this application.

### Listing of Claims

1. **(Original)** A polynucleotide comprising:
  - a) a first nucleic acid encoding a CD8  $\alpha$ -chain operably linked to nucleic acid encoding a transmembrane polypeptide; and
  - b) a second nucleic acid comprising a therapeutic gene of interest; and
  - c) at least a first transcription and translational control element for directing expression of said first and second nucleic acid.
2. **(Original)** The polynucleotide according to claim 1, wherein said nucleic acid encoding a CD8  $\alpha$ -chain has greater than 80% sequence identity to the nucleic acid encoding the human CD8  $\alpha$ -chain as set forth in Figure 1 (SEQ ID NO:2).
3. **(Original)** The polynucleotide according to claim 1, wherein said nucleic acid encoding a CD8  $\alpha$ -chain has greater than 80% sequence identity to the nucleic acid encoding the mouse, rat, or porcine CD8  $\alpha$ -chain as set forth in Figure 1 (SEQ ID NOS:8, 10, 12, 14, 20 and 24).
4. **(Original)** The polynucleotide according to claim 3, wherein said nucleic acid encoding a CD8  $\alpha$ -chain comprises the mouse, rat, or porcine CD8  $\alpha$ -chain as set forth in Figure 1 (SEQ ID NOS: 8, 10, 12, 14, 20 and 24).
5. **(Original)** The polynucleotide according to claim 1, wherein said CD8  $\alpha$ -chain comprises the sequence selected from the group consisting of the sequences set forth in Figure 1 (SEQ ID NOS:1-26).
6. **(Original)** The polynucleotide according to claim 1, wherein said CD8  $\alpha$ -chain lacks the intracellular domain of wild-type CD8  $\alpha$ -chain.
7. **(Original)** The polynucleotide according to claim 1, wherein said therapeutic gene of interest is selected from the group consisting of hemoglobin- $\beta$ , GATA-binding protein, d-aminoevulinate synthase, glucose-6-phosphate-dehydrogenase, Coagulation Factor VIII, Coagulation Factor XI, cystic

fibrosis transmembrane conductance regulator, ornithine carbamoyl transferase,  $\alpha$ -L-iduronidase, iduronate-2-sulfatase,  $\beta$ -glucosidase,  $\alpha$ -galactosidase, galactosylceramidase, acid  $\alpha$ -glucosidase, hexamidase A, phenylalanine hydroxylase, collagen type IV,  $\alpha 5$ , Bloom Sundrome Gene Product, and low density lipoprotein receptor.

8. **(Currently amended)** ~~The polynucleotide~~ A vector comprising the polynucleotide according to any one of claims 1 to 7 ~~wherein said polynucleotide comprises a vector.~~

9. **(Currently amended)** The vector polynucleotide according to claim 8, wherein said vector is selected from the group consisting of a recombinant adenovirus, a recombinant retrovirus, a recombinant adeno-associated virus, and a recombinant herpes virus.

10. **(Currently amended)** The vector polynucleotide according to claim 9, wherein said vector is replication defective.

11. **(Currently amended)** A composition comprising the polynucleotide according to any one of claims 1, 2, 3, 4, 5, 6 or 7, further comprising liposomes.

12. **(Withdrawn and currently amended)** A method for reducing an immune response against antigens derived from a gene therapy delivery system comprising:

a) contacting a cell with said gene therapy delivery system, wherein said gene therapy delivery system comprises the polynucleotide according to claim 1;

~~\_\_\_\_\_ i) a first nucleic acid encoding a CD8  $\alpha$ -chain operably linked to nucleic acid encoding a transmembrane polypeptide; and~~

~~\_\_\_\_\_ ii) a second nucleic acid comprising a therapeutic gene of interest; and~~

~~\_\_\_\_\_ iii) at least a first transcription and translational control element for directing expression of said first and second nucleic acid, whereby said first and second nucleic acids are expressed, whereby the expressed CD8  $\alpha$ -chain is associated with the cell membrane of said cell, and whereby a host immune response against said cell is diminished as compared to the immune response against a cell without the CD8  $\alpha$ -chain encoding nucleic acid.~~

13. **(Withdrawn)** The method according to claim 12, wherein said gene therapy delivery system is selected from the group consisting of a viral expression vector, a plasmid and a naked nucleic acid expression vector.

14. **(Withdrawn and currently amended)** The method according to claim 13 wherein said viral expression vector is selected from the group consisting of ~~{}of~~ a recombinant adenovirus, a recombinant retrovirus, a recombinant adeno-associated virus, and a recombinant herpes virus.

15. **(Withdrawn)** The method according to claim 12 wherein said therapeutic gene of interest is selected from the group consisting of hemoglobin- $\beta$ , GATA-binding protein, d-aminoevalinate synthase, glucose-6-phosphate-dehydrogenase, Coagulation Factor VIII, Coagulation Factor XI, cystic fibrosis transmembrane conductance regulator, ornithine carbamoyl transferase,  $\alpha$ -L-iduronidase, iduronate-2-sulfatase, -glucosidase,  $\alpha$ -galactosidase, galactosylceramidase, acid  $\beta$ -glucosidase, hexamidase A, phenylalanine hydroxylase, collagen type IV,  $\alpha$ 5, Bloom Syndrome Gene Product, and low density lipoprotein receptor.

16. **(Withdrawn)** The method according to claim 12, wherein said nucleic acid encoding CD8  $\alpha$ -chain comprises the sequence set forth in Figure 11 (SEQ ID NO:28).

17. **(Withdrawn)** The method according to claim 12, wherein said nucleic acid encoding CD8  $\alpha$ -chain encodes a protein having a sequence as set forth in Figure 10 (SEQ ID NO:27).